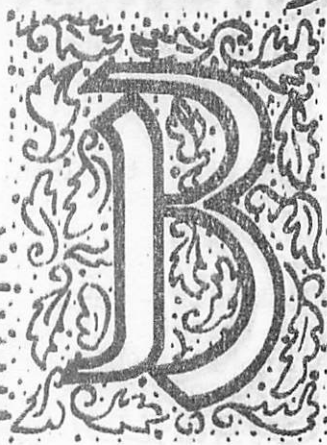


PHILMONT *Mobile* RADIO CLUB INC.

The



BLURB

AREA.
MEMBER



OCTOBER



MONITOR NET

FREQUENCY-29.493 MHz



FRED SHAW, W3ADV · PRESIDENT of PHIL-MONT *MOBILE Radio CLUB*

The BLURB is published monthly by and for the members of the Phil-Mont Mobile Radio Club. Our purpose is to further the interest of amateur radio in general and mobile radio in particular. We endeavor to keep the news accurate, interesting, and educational. Copying and quoting is permitted, with a credit line, and we gladly exchange subscriptions with other clubs.

DEADLINE: All material must be in the hands of the Department Editor before the 15th, as the BLURB is mailed on the last Monday of each month.

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W3TKQ - CLUB STATION

The Franklin Institute
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Philadelphia, Pennsylvania 19103

CLUB NETS & FREQUENCIES

29.493mc - 10-on-10 Net Sundays
1000, monitored daily. 29.626mc
2nd Freq., 3993kc SSB 0730-0845,
50.70 and 52.525mc (FM) 147.78mc

Sam's

HALF ACRE
SATELLITE XMTG FREQ'CY

U. S. S. R.

XMTG. FREQ.

183.6 MC.

20.004

20.006

19.996

U.S. PRESENTLY XMTG
SATELLITE FREQ.

ECHO-2 = 136.019 MC.
136.170

TIROS-8 = 136.231
136.924

OGO-1 = 400.250

SYNCOM-2 = 1814.069

I am the first one to admit that my contributions to the Blurb each month have not put forth any "Pearls of Wisdom" - rather I have tried to keep these paragraphs folksy, informative, congratulatory, etc. This month I do have something to propose that is thought provoking, is different from the way we have traditionally done things in Phil-Mont, and which possibly could result in a definite improvement. It is something that would require complete discussion, considerable thinking by all of us and then if we can agree - a change in our by-laws.

I suggest that each year when we vote, that we vote only for the Vice-President, Secretary and Treasurer. And that the current year's Vice-President, is automatically next year's President. This method is used by many organizations and serves to give a continuity of purpose and service because of the year's association between the President and Vice-President. It seems to me that this method would provide certain definite advantages.

Realizing that this change, if made, could not possibly be done in time to affect this year's election - I propose to have a discussion at the November meeting of the pros and cons of such a system. Any action, if taken, will come later. Best 73's.

Fred, W3ADV

SEPTEMBER MEETING REPORT

Visitors to the last regular club meeting were K3EGG, K2SVX, Phil Allen, and G3KSG/2 of RCA-Great Britain, who happens to be working for the present in the Broadcast Division at Camden.

The program was a Bell Telephone lecture on the development of sound reproduction, with tape recorded demonstrations illustrating improvements in audio equipment from old telephone quality to today's modern distorted "Hi Fi". The quality of the recorded sound used for the demonstration unfortunately fell far below what one expects of high quality reproduction today, or even fifteen years ago, and much of the potential of a program of this nature was thereby lost.

W3ADV more than compensated for the formal program with his interesting description of steps taken at the Bell mobile telephone base transmitter site to eliminate interference in Collingdale. The problem was traced to crossmodulation, in one or more of the final amplifiers, between the signal passing through the amplifier and one fed back from the antenna that had been picked up from another transmitter in the system on a near-by frequency. It was cured by the use of a circulator - a device that goes in the transmission line to isolate the transmitter from the signal picked up by the antenna. After all the work and expense however, there was still a trace of interference because of the high power being used, so the Collingdale station changed frequency!

QQH and VVS brought a Nordic glider they had picked up at the recent model plane meet to illustrate the type of craft flown and retrieved. Wonder if the owner of that plane had any idea who "retrieved" it???

The President has appointed the committee that will select nominees for the 1967 officers. W3DDY is Chairman and will be assisted by DSG, WNC, QQH and JGB. In addition to the Committee's recommendations nominations may be made by any individual member before Nov. 8, PROVIDED the nominee has previously consented to run for office.

* * * * *

HUDSON DIVISION CONVENTION OCTOBER 15, 16

A group expects to go to Tarrytown on Saturday the 15th to participate in the forum on mobile radio at the Hudson Division Convention. Plans are for the gang to leave about 0730 and arrive about 1100 in time for Phil-Mont's spot on the program. Those indicating an interest in going are AES, AHP, DSG, NIP, OWK, PHC, QQH who is taking the trailer, QED, SPS and UWO.

The convention is actually going to run two days with a banquet Saturday night featuring Jean Shepherd as guest speaker, manufacturer's exhibits, Miss Amateur Radio (?), and a long list of daily programs of interest to hams. Registration is \$3.00 for the programs and \$8.00 for the banquet. Rooms are available at the Hilton Inn for those wishing to stay Saturday night. Rates are \$14 and \$18 for a single or double; September 30th last day for room reservation.

* * * * *

GOLF MATCH COMMUNICATIONS OCTOBER 16

Arrangements have been made again this year to provide communications from the St. Davids golf course to their Club House during a tournament to be held on Sunday, October 16, from noon to 5 PM. Ten meters will be used for main link, although W3RTR has promised to show up with his Communicator "Tree". Others who have said they would be there are AHP and GIF to operate NCS, ADV, DSG, and QQH if he let out for another day after Tarrytown. This affair has always been popular with those who have provided their services and they might be able to use one or two more if you should decide to give it a fling.

* * * * *

MIDMONTH MEETING OCTOBER 19

W3OEC will be host for our October MM. Bob lives in Springfield Delaware County at 351 Harwicke Road. Harwicke Road intersects Powell Road between the Police Station and the Fire House - two establishments nice to have near-by when Phil-Mont gets together. W3OEC will be on Channel 1 and 52.525 MHz to help mobiles locate his QTH.

BANQUET NOVEMBER 12

This year there will be some changes that should make our annual Banquet better than ever. There will be fewer prizes, but they will be of much higher quality than before. In addition, the affair will be held at Williamson's Restaurant in the Barclay Building on City Line; the view is terrific. It is planned to have tickets at the October Regular Meeting. Full details in an announcement next month.

The list below shows the altitude of several Phil-Mont stations. It was compiled with the aid of US Geological Survey topographic maps, several street maps and the new PMRC Directory. The accuracy varies somewhat because ED has not personally visited all the QTHs listed, and uncertainties in exact locations can result in errors of ten feet or so.

As might be expected, hams are generally found in the high spots. Terrain altitudes vary from about 490 down to 50 feet on the Pennsylvania side of the Delaware around Philadelphia, and the average height of stations listed is 304 feet - not bad. There isn't much choice on the New Jersey side; even the highest hills are only 150 feet, but the regularity of flatness at least minimizes obstructions and results in good ground wave propagation.

Apologies to those omitted from the list, who were either beyond the limits of my topographic maps or could not be found on street maps.

W3ADV	400	W3GIF	350	W3OM	240
W3AJO	150	W3HFX	300	W3OWK	140
W3AWH	320	W3HQJ	400	W3QQH	260
K3CEE	310	W3IW	340	W3QV	350
W3CW	290	W3JGB	215	W3QZO	380
W3DJW	295	W3JYA	270	WA2RDC	65
W3DSG	300	W3KUD	360	W3VVS	335
W3EQV	400	W3MHR	250	W3WNC	390
				W3YHV	260

* * * * *

NEW HEATH STORE

A new "Heathkit Electronic Center" has been opened by the well known Benton Harbor firm at 6318 Roosevelt Blvd., on the west side of the Blvd. near Robbins and Levick Streets. This is a direct factory-owned and operated emporium that will stock and display the entire (presumably) Heath line. Some of the boys who visited the store during its opening report that there is an elaborate display of audio equipment as well as color TV, organs, test instruments and several items marketed, but not manufactured, by Heath. A service facility will also be maintained.

The cost of kits is the catalog price plus shipping and a small handling charge - not bad, EXCEPT the sales tax kills it in ED's estimation. For example, the SB-401 Transmitter kit has a catalog price of \$285. Shipping brings the total cost by mail to \$291.24. The store price is only \$295 - not bad at all until the clerk adds the last line on the bill. You then pay a total of \$309.75 for a difference, compared to ordering direct from the factory, of \$18.51. Oh well, politics is politics, and taxes is taxes.

* * * * *

CONGRATULATIONS TO W3CDY

On October fifteenth Lloyd Sherman will be married. ED joins the entire Phil-Mont gang in wishing the Editor-in-Chief a world of happiness and good fortune!

It is the custom for Phil-Mont to make certain awards to persons in recognition of their personal contribution to Phil-Mont and to Amateur Radio; personal contribution in terms of time, effort, and personal sacrifice put forth by the individual for the benefit of all Philmonters and amateur mobile radio in general. Once again the time draws near when Phil-Mont will present awards to the membership at the annual Banquet.

To refresh your memory, the following is a brief summary of Phil-Mont Awards:

1. "LeRoy Hauser Memorial Award" - an award made to a member for an outstanding single or multiple contribution to the Club. (This award is not necessarily awarded annually)
2. "Phil-Mont 1966 Award" - an award which is an annual award made to a member for a single contribution or for continuous effort on the part of the member on behalf or in the interest of Phil-Mont and Amateur Radio.
3. "Lady Phil-Monter Award" - an award to the fair sex, usually the wife of a member (she is not required to hold a license) for a contribution or continued support of Phil-Mont or Amateur Radio.
4. "Iduabmug Award" - a "fun-type" award to a member who has committed the biggest "goof" of the year.

Nominations received in the form of ballots at the October regular meeting will be most helpful to the Awards Committee. With this in mind, Phil-Mont members should seriously review their 1966 back issues of the Blurb with the idea of casting a ballot suggesting individuals who are most deserving of an award.

W3VVS

AUCTION AUCTION AUCTION AUCTION AUCTION AUCTION AUCTION

Except for Awards balloting, announced above, the entire October meeting will be turned over to W3WNC, Auctioneer Extraordinary. Bring equipment you are no longer using or even the junk you bought at last year's auction, and Hy will get top dollar for you (or top dime, as the case may be).

The Club collects ten percent of each sale with a maximum charge of three dollars. If the bidding isn't up to your expectations despite the insulting prods of the auctioneer, you can bid on it yourself to keep some cheapskate from getting it (there will be about forty or fifty cheapskates there, so watch out). You still pay PMRC the ten percent if you buy your own over-rated junk, but there is a one dollar limit in that case.

Even if you don't intend to buy or sell anything come and stand around as though you were, twisting knobs off shafts, detuning IF amplifiers, scratching paint and getting in the way - that's what the Phil-Mont auction is for, isn't it? ?

Last month the emitter follower circuit configuration was discussed in relation to power supply regulation. Recall that the emitter follows the base voltage; emitter voltage (in linear Class A operation) is independent of collector voltage or value of emitter resistor. The emitter resistor can be a transistor receiver or RTTY gear we are experimenting with, and the varying collector voltage can be a poorly regulated single wave or bridge rectifier power supply with lots of hum. Figure 1a is the basic emitter follower (series regulator) circuit.

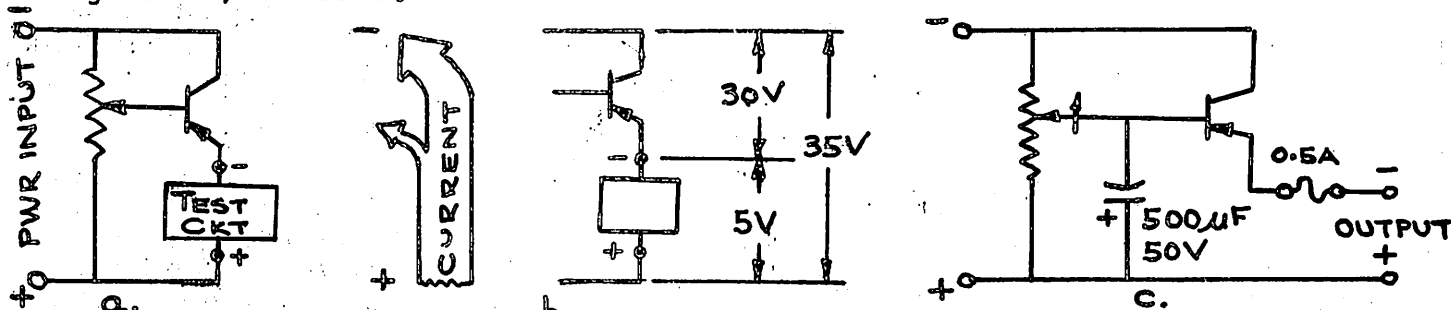


FIGURE 1.

When the slider of the pot is all the way up, full output voltage is supplied; when it is all the way down, the output is zero. The type of transistor used depends on the amount of current you intend to draw. If you just want something to supply variable voltage for BC receiver testing a medium power transistor in a small case like a 2N270 or 2N526 will handle 100 ma or so. Or, for more current you can use almost any of the "similar to..." variety of diamond shape (TO-3) cheapo power transistors. Since a half amp capability fills a variety of home brew requirements let's base a simple design on that requirement. Also, say that the input voltage is 25-35 volts, which is typical for a 24 volt filament transformer, silicon bridge rectifier and RC filter. Three things must be considered in this circuit:

1. The transistor collector breakdown voltage (BV_{CE} to be explained in a subsequent article) must be at least equal to the d-c input. A 40 volt or higher rating is required here.

2. The collector dissipation rating of the transistor must not be exceeded when you are drawing maximum current at low output voltage. Most of the load current flows thru the collector (see fat arrow, Figure 1b). Also, the "unused" input voltage appears across the transistor (Figure 1b), and the product of collector current and emitter-collector voltage drop is power which must be dissipated by the transistor.

$$P = E \times I = 30 \times 0.5 = 15 \text{ watts}$$

Therefore the transistor must be rated for about 20 - 25 watts and should be mounted on a metal plate or chassis for cooling. Of course at higher values of output voltage or at lower currents the dissipation goes down, but a 25 watt rating puts us on the safe side in the worst-case condition (except short circuit).

3. The base current must be known approximately, but how on earth do you find that out? Beta to the rescue! The current gain (β or H_{FE}) is the ratio of collector current to base current. We know the maximum collector current will draw, or should draw, is 0.5 amp.

If you don't know the of the power transistor you are using guess at 20. Then,

So! The greatest amount of current flowing out of the base is 25 ma (except-gulp-a short circuit). Our base voltage control pot must be able to handle at least 25 ma from the base plus the current flowing from +30 to ground. A 1K pot with 2 watt rating (A-B of course) will fill the bill but it has one disadvantage: It looks to the transistor as if there is a resistor in series with its base. Consequently, as you pull current from the regulator, the base current goes up and the drop in the resistance causes the voltage at the base to fall, resulting in a drop in output (emitter)voltage. In other words, the regulation of the supply will be poor, but good enough for most of our needs.

The regulation problem could be solved by using a small battery, Figure 2a, or a zener diode, Figure 2b, but then the supply voltage would not be variable. The problem could be reduced considerably by using another emitter follower to regulate the base voltage of the output E.F. In some commercial applications as many as four emitter followers will be cascaded since each one you add improves regulation by β (20 for one transistor, 400 for two, etc.) Another, more elegant way is to use feedback, which permits great range of output voltage with excellent regulation. If there is enough interest in such a supply a simple circuit will be published.

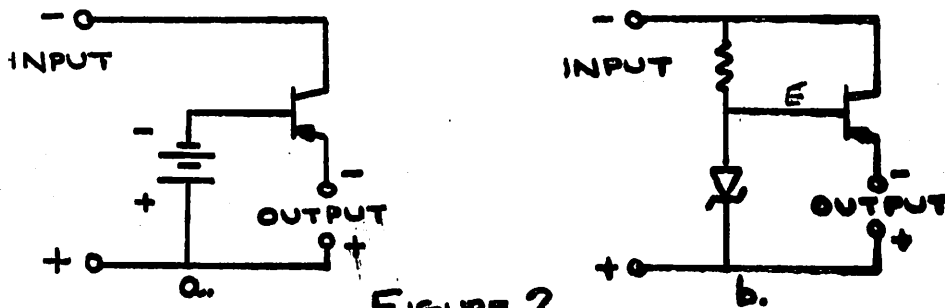


FIGURE 2

One last word about this month's circuit, Figure 1c. A capacitor has been added at the base to filter supply ripple - there is a big reduction in output hum when you use an emitter follower with pure d-c on its base. Also, a fast blow fuse in the emitter lead helps prevent disaster in event of a short on the output.

TELETYPE STATIONS OPERATING AT 60 WPM

The list below was copied from RTTY magazine, September 1966. Frequency shift was not given. Frequencies in KHz. No schedules given.

WFA-37	7737.5	WWA-87	7682.5	WNE-33	23355
WD-54	14741.775	WNA-67	7745	WFO-66	16207.
WWA-65	5247.5	WNC-21	11115	Carribean-	14395
WWA-76	6875	WNC-64	15537.5	Station	

W3IDR is mobile again on Channel 1 after a four year absence... QV is getting on 2 meter RTTY and planning a demonstration for November meeting... MHR had problems with his just-completed HW-12... IW now has his Hot Water-Twelve in the car for morning contacts on way to station... K3CEE back at school... Don't forget the auction at October meeting... AWH did his usual terrific job on the Blurb last month... JIL, EBY and FTZ attended York Hamfest... WXC has new Channel 1 fixed rig consisting of G-28 and 5/8-wave ground plane... Is W3AUF prophetic? Spike just got a high-performance racing boat. In his final mobile transmission while on way to sail it, he was heard to say, "This new boat should really go. OVER"... ADV playing golf and building 2/6 meter for TKQ over Labor Day weekend. Then off to Hawaii... GBA and QZO had impromptu QSO near Shipbottom. QQH and CEE also at shore same weekend but did not hook-up with the others... Mrs. CW has been under the weather recently. So has Barney's home rig... W3NL and Auto-Call moved to Kansas... JGB has added an outboard vernier tuning control to his mobile HW-12... HLN reports that there will be a simulated emergency to test Montgomery County CD between 10 AM and 10 PM on October 9... QV repaired AJQ's 6 meter rig. Former also put his finger on trouble in QQH's Mobile receiver... YHV (alias Sleepy Head) just couldn't make it on time for 10-on-10... OM checking-in on 10-on-10... KUD deserting Channel 1 for, Ahhhh, Ahhhhhhhh, SSB... OWK has been souping-up new CB Messenger for DJW. Original output was 3 watts. After modification output was up to 7 watts. Al shorts the final amp screen resistor and installs silicon rectifiers to get the boost... PIT is being moved from FM Transmitter site of WPEN to AM site. IRS will remain at home location... From the Blurb ten years ago this month: PMRC getting ready for banquet; PXY complaining about poor return of Blurb News post cards; the US Treasury asked D\$G if he wanted his face put on the new \$500.00 bill. He said, "No, just my hand"... VVS has been working evenings... YHV had many QSO's with local gang on his recent trip thru the South, among them IW and GNM... Commenting on prospect of organ music for dancing at upcoming banquet, Ernie says he likes organ music for church services and funeral parlors only... WNC is being transferred permanently to GE at 32nd Street... ED recently made a visit to the QQH repeater. It has the commercial appearance that is expected of Jim... UQV was one of the speakers at SJRA blast. Joe pointed out some interesting figures in operation of FCC. They have 1500 employees with 500 in the field; handle 5.5 million licenses; investigated 7000 questionable signals (there are that many on Ch 1 alone!); TVI cases were down last year to 27,000... MHR will help reactivate TKQ code practice program. More assistance is needed in this project... If Heath had been schmart they would have put new store at Plymouth Meeting where the business is... The following blank space is where we would have printed your news if you had only sent it in:

...By the time you read this Antique Wireless Nite at Franklin Institute will be past. According to W3CDY Clarence Tuska is attending and QV is taking an operating spark rig. Scheduled for Sept 25 - too late for on-hand report... UVL's son attending Dartmouth... JKH has a circuit for using 7 MHz crystals in place of 14 MHz rocks originally specified in Morrow gear supplied by QQH. He replaced Hartley with modified Pierce as plugged by Peterson several years ago... Don't forget the auction at the October meeting.

K3RTR REPORTS ON NAVY MARS MEETING - WARREN OHIO, AUG 28

Since there are now nine Philmonters who are Navy MARS members (RTR, CDY, RSX, WVB, KFL, PWG, PHC, AES and ZN) we thought this report in the Blurb would be of interest. Five of us left Upper Darby Saturday morning at 5 AM in my car and arrived in Pittsburgh at the Bureau of Mines, where Navy MARS has a station in operation, about 2:30 PM (Navy MARS in a mine? ED.). We had a FB meeting there with the members there. We also operated the various types of equipment in the shack. Saturday nite we went to the home of one of the members and all of us checked into the 4th District Net at 2200Z on 4015 KHz. Later at 0200Z we acted as NCS for the Pa. area net on 4040 KHz. After all traffic was cleared we had several QSOs with Philadelphia members on SSB, also RTTY. NØVLO Frank has a shack filled with ham gear of every description including teletype, all in operating condition. This visit lasted until the small hours of the morning. We stayed in Pittsburgh overnight and left for Warren Sunday morning about 10 AM and arrived in Warren, Ohio about 1:30 PM. This hamfest was similar to most that we have attended in the past. The usual "Flee Circus" (sic.) and junk that hams wanted to unload. There were about 400 door prizes (none of us won anything). We set up our Navy MARS electrical display and were in business answering many questions pertaining to Navy MARS. About fifty Navy MARS attended a special meeting held in one of the rooms assigned to us. Billy Gray NØASD was the principal speaker. After dinner at our motel we all went into the pool and had a lot of fun. Later that evening we had a real bull session in our motel room with NØUHQ and NØUHZ. The ingredients for this eye (HI) ball was supplied by NØUHQ. We wish to thank them publicly for the fine job they did. NØTBG Carl Anderson had the floor most of the evening with his many stories about amateur radio. The meeting broke up at 3 AM - we ran out of "ingredients". We took off for home Monday morning and arrived in Upper Darby at the home of NØSNB (W3ZN) in time to check into the 2200Z net from his shack. The five members who made the trip are NØUKP, NØASD, NØXAW, NØZOA and NØZNB. de K3RTR (NØUKP)

NOTICE - - - K3KUD WILL BE EDITOR FOR NOVEMBER BLURB. Send all scoop for the next issue of the Blurb to Robert G. Schmilewske, K3KUD 528 Melody Lane Glenside, Pa. 19038.

MORE CHANNEL CHATTER

Our favorite artist, Sam, WA3CNI is looking around for some 6 meter equipment... K3KUD on on mend after visit to hospital... WHO had the dead carrier on until last minute before recent 10-on-10 net... HQJ in Roma... PWG and XYL back from visit to son in AF at Colorado Sprgs... IW may know which end of mike to talk in, he just has trouble on which mike to use!... 15 showed up for MM at K3UWO despite rain storm... More stations coming onto Channel 1 than leaving... QQH looking for medium power "bull horn" for trailer roof... Club is on lookout for SSB transceiver... Say hello to new members WB2WJE, Bob and WA3ABU, Win. Directory correction: K3UWO phone at home is 822-3801.

ALL ITEMS LISTED ARE FOR SALE.

TURNER DYNAMIC MICROPHONE - 200 ohm, in excellent condition. \$2.00

Gerard A. Baldauf, W3JKH

175 Wernersville Blvd. Wernersville, Pa. 19565 215-678-3980

HEATHKIT SENECA VHF-1 2&6 meter transmitter with new 6146Bs and 2E26.
Plate modulator from 1952 Handbook - 60 watts, with transistorized
speech clipper and Drake Lp-1000 Low pass filter.

Seneca, speech clipper and filter \$155, Modulator \$45, All for \$175

Frank Esseluhn, K3MG

12 Larchwood Road Wyomissing, Pa. 19610 215-374-9342

CENTRAL ELECTRONICS 20A and BANDHOPPER VFO 160-10, SSB, AM, CW, FM

HEATH SIXER AND TWOER - both unconverted

HEATH GW-22, 5 watt transceiver on 29493 and 29520

MOTOROLA SIX METER FM BASE STATION on 52525

RCA HIGHBAND MOBILE UNITS - UNCONVERTED CMC-10 (several available)

SIX METER COAXIAL ANTENNA

HEATHKIT POWER CONVERTER - 12volts dc to 115 volts ac

SCUBA DIVER REGULATOR - US Divers Aqua-matic

K3DSM, MO4-0593 after 6PM

JOHNSON MESSENGER complete with Phil-Mont xtals and xtals for four
other channels. \$109.50

K3OJA, MI9-1514

SOCKETS, CHIMNEYS, FIL XFMRs for 4-400s (no tubes)

ONAN 3KW 100 VAC GENERATOR

HEATHKIT APACHE TRANSMITTER AND SB-10

Above equipment property of Phil-Mont Mobile Radio Club. Contact:

Jim Spencer, W3QQH 884-8469

HARRISON PHONE PATCH \$10

FM MONITOR RECEIVER - 110 volt highband rack mounted rcvr with three
channel xtals for Lower Merion, Cheltenham and Pa Tnpk. \$70.

FM MOBILE HIGHBAND RECEIVER on 154.13, 12 VDC \$70.

RCA CMV 2 LOWBAND FM T/R - unconverted. Two available. \$35. ea.

Jim Spencer, W3QQH 884-8469

RCA CMV 2 FM MOBILE TRANS-REC xtal controlled on 52,525. 12 VDC.

Complete with control head, cables and antenna. In excellent condition.

Lloyd Sherman, W3CDY EL6-4787 448-1276

JOHNSON VIKING II \$90

John Gerhart, W3KNC 933-3331

FREQUENCY AND TIME STANDARDS

Interested in precision frequency measurement? If so, consider
sending for the book listed here. It explains the use of exotic
equipment for primary and secondary time (frequency) standards.
Appendix is extensive: covers solar, mean, universal, sidereal, etc.,
time; NBS standard transmissions; world-wide transmitting stations;
nomographs and tables. Ask for Application Note 52 - "Frequency and
Time Standards" Hewlett-Packard Co., 1501 Page Mill Rd., Palo Alto, Cal.